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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/682,293	10/09/2003	Eric Teller	Auto-Journal-US	9347

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EXAMINER	
RAJAN, KAI	

ART UNIT	PAPER NUMBER
3769	

NOTIFICATION DATE	DELIVERY MODE
10/14/2011	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No.	Applicant(s)	
	10/682,293	TELLER ET AL.	
	Examiner	Art Unit	
	KAI RAJAN	3769	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12 July 2011*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

5)☒ Claim(s) *See Continuation Sheet* is/are pending in the application.

5a) Of the above claim(s) *2,21,23,26,45-95,97,99,120,123 and 139-170* is/are withdrawn from consideration.

6)☐ Claim(s) *171-175 and 177* is/are allowed.

7)☒ Claim(s) *1,7,11-15,24,25,31,33,35-39,176 and 179* is/are rejected.

8)☐ Claim(s) _____ is/are objected to.

9)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

12)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Continuation of Disposition of Claims: Claims pending in the application are 1,2,7,11-15,21,23-26,31,33,35-39,45-95,97,99,120,123 and 139-179.

DETAILED ACTION

Examiner acknowledges the response filed July 12, 2011.

Response to Arguments

Applicant's arguments have been considered but are moot in view of the new ground(s) of rejection.

Allowable Subject Matter

Claims 171 – 175, 177, and 178 are allowed. The applied prior art alone or in combination fails to disclose or fairly suggest determining a user context using both heat flux and skin resistance data, where the determined context is used to predict energy expenditure.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 176 and 179 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. In particular, claims 176 and 179 recite a "heat flux gain average variance." Since this calculation appears to be

created by the Applicant, the Examiner has turned to the specification for support and definition of the calculation. Paragraphs 0010, 0011, and 0241 contain the only supporting disclosure for "heat flux gain average variance," and they define the calculation with an equation comprising five constants. The disclosure fails to enable one of ordinary skill to make or use the invention without undue experimentation, since the origin, numerical value, or calculation of each of the five constants is not disclosed. If a calculation of "heat flux gain average variance" and its associated constant values are known to those of ordinary skill in the art, Applicant is requested to provide evidence to support its commonality.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 7, 11 – 13, 15 and 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mault U.S. Patent No. 6,571,200 B1, cited by Applicant, in view of Thomas U.S. PGPub No. 2003/0013072 A1, further in view of Shusterman U.S. PGPub No. 2006/0122525 A1, cited by Applicant.

Regarding claim 1, Mault discloses an apparatus for deriving a state parameter of an individual, comprising:

a processor; at least one of a sensor for generating a sensor output signal, and said sensor output signals being directed to an electronic communication link with said processor (Mault column 4 lines 35 – 39, figure 1 item 12 body activity monitors include exertion detector that collects physiological data such as heart rate, but fails to disclose temperature or skin resistance sensors measuring exertion, see below. Mault column 4 lines 65 – 67, column 5 lines 1 – 19 microprocessor receives data);

wherein said processor automatically determines a context of said individual (Mault column 3 lines 5 – 10, column 4 lines 55 – 67, column 5 lines 1 – 40, column 6 lines 3 – 46, see also figure 2 microprocessor uses activity monitor data such as heart rate to determine the exertion level of the user, which comprises a context of the user's activity); and

wherein said processor utilizes said context to predict the energy expenditure of said individual (Mault column 3 lines 5 – 10, column 4 lines 55 – 67, column 5 lines 1 – 40, column 6 lines 3 – 46, see also figure 2 microprocessor uses determined exertion level of the user to calculate the total calories expended).

Mault discloses an exertion level sensor such as a heart rate sensor for collecting physiological data concerning the user's exertion level during exercise. Mault fails to disclose a skin resistance sensor. However Thomas, a reference in an analogous art of physiological monitoring, teaches monitoring skin resistance levels to determine the level of exercise (Thomas paragraph 0033). It would have been obvious to one of ordinary skill in the art at the time of the invention to substitute the heart rate sensor based activity level of Mault with the skin resistance based activity levels of Thomas, since it would be obvious to substitute one known method of

calculating activity level with another known method to achieve expected results of activity level/intensity, which comprises "contexts" within the scope of Applicant's disclosure.

Furthermore, Mault and Thomas disclose identifying activities performed by the user by analyzing multiple parameters in an operational mode, and using previously collected learning mode data to identify the activity (Mault column 2 lines 60 – 67, column 3 lines 1 - 14, column 6 lines 3 – 64). Such a learning and operating system as disclosed uses types of pattern matching and correlation (drawn to regression and classification) to identify activities performed, yet Mault fails to explicitly disclose the specific calculations used, such as naive Bayesian classifiers or linear regression. However Shusterman a reference in analogous art of physiological monitoring discloses various types of calculations for pattern matching that may be used in the alternative, including at least linear regression and Bayesian classifier methods (Shusterman paragraph 0019, 0023). It would have been obvious to one of ordinary skill in the art at the time of invention to implement the known pattern matching calculations such as linear regression and Bayesian classifiers of Shusterman in the pattern matching and correlation based process of Mault to achieve the expected results of identifying activity performed by a user by comparing collected data to previously collected training data. Additionally, Applicant's disclosure has not provided any reasoning or advantages of using linear regression and Bayesian classifiers instead of other types of correlation and pattern matching calculations.

Note to Applicant: See previous action for rejection of unaddressed dependent claims, as they are rejected on substantially the same basis.

Claims 25, 31, 33, 35 – 37, and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mault U.S. Patent No. 6,571,200 B1, cited by Applicant, in view of Ellis et al. U.S. PGPub No. 2004/0102931 A1 ("Ellis"), cited by Applicant, further in view of Thomas U.S. PGPub No. 2003/0013072 A1, and further in view of Shusterman U.S. PGPub No. 2006/0122525 A1, cited by Applicant.

Regarding claim 25, Mault discloses a method of measuring a state parameter of an individual, comprising:

collecting from a sensor (Mault column 4 lines 35 – 39, figure 1 item 12 body activity monitors include exertion detector that collects physiological data such as heart rate, but fails to disclose temperature or skin resistance sensors measuring exertion, see below. Mault column 4 lines 65 – 67, column 5 lines 1 – 19 microprocessor receives data);

utilizing a processor to automatically determine a context of said individual based on at least one of the data from said individual's body (Mault column 3 lines 5 – 10, column 4 lines 55 – 67, column 5 lines 1 – 40, column 6 lines 3 – 46, see also figure 2 microprocessor uses activity monitor data such as heart rate to determine the exertion level of the user, which comprises a context of the user's activity); and

utilizing said context to predict an energy expenditure of said individual (Mault column 3 lines 5 – 10, column 4 lines 55 – 67, column 5 lines 1 – 40, column 6 lines 3 – 46, see also figure 2 microprocessor uses determined exertion level of the user to calculate the total calories expended).

Mault discloses collecting data from a user such as heart rate and accelerometer data, yet fails to disclose collecting data indicative of heat flowing from the user's body or skin resistance. However Ellis, a reference in an analogous art of physiological monitoring of exercise parameters, discloses collecting skin temperature and skin resistance data in addition to heart rate data (Ellis paragraphs 0382, 0383, 0398, 0399). It would have been obvious to one of ordinary skill in the art at the time of invention to modify the system of Mault to include the skin temperature and skin resistance sensors of Ellis, since Ellis discloses both parameters as very useful for monitoring exercise performance and fitness, which would improve the exercise monitoring system of Mault (Ellis paragraphs 0382, 0383, 0398, 0399).

Note to Applicant: See previous action for rejection of unaddressed dependent claims, as they are rejected on substantially the same basis.

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mault U.S. Patent No. 6,571,200 B1, cited by Applicant, in view of Thomas U.S. PGPub No. 2003/0013072 A1, further in view of Shusterman U.S. PGPub No. 2006/0122525 A1, cited by Applicant, as applied to claims 1, and 11 above, further in view of Karkanen U.S. Patent No. 5,839,901.

Regarding claim 14, Mault, Thomas, and Shusterman disclose a system for monitoring physiological data and outputting information such as caloric balance and expenditure and trend data to promote weight loss. Mault, Thomas, and Shusterman fail to disclose displaying

information regarding rate of weight loss or gain. However Karkanen a reference in an analogous art of physiological monitoring and weight control discloses calculating and displaying weight change rates (Karkanen see at least figures 12 and 16 with respective figure descriptions in the specification). It would have been obvious to one of ordinary skill in the art at the time of invention to modify the displayed trend and caloric expenditure data of Mault, Thomas, and Shusterman with the weight change rate data of Karkanen, since both inventions improve weight loss and weight control, and the features of Karkanen optimize weight loss (Karkanen column 1 lines 6 – 23).

Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mault U.S. Patent No. 6,571,200 B1, cited by Applicant, in view of Ellis et al. U.S. PGPub No. 2004/0102931 A1 ("Ellis"), cited by Applicant, further in view of Thomas U.S. PGPub No. 2003/0013072 A1, and further in view of Shusterman U.S. PGPub No. 2006/0122525 A1, cited by Applicant, as applied to claims 25 and 35 above, further in view of Karkanen U.S. Patent No. 5,839,901.

Regarding claims 14 and 38, Mault, Ellis, Thomas, and Shusterman disclose a system for monitoring physiological data and outputting information such as caloric balance and expenditure and trend data to promote weight loss. Mault, Ellis, Thomas, and Shusterman fail to disclose displaying information regarding rate of weight loss or gain. However Karkanen a reference in an analogous art of physiological monitoring and weight control discloses calculating and displaying weight change rates (Karkanen see at least figures 12 and 16 with

respective figure descriptions in the specification). It would have been obvious to one of ordinary skill in the art at the time of invention to modify the displayed trend and caloric expenditure data of Mault, Ellis, Thomas, and Shusterman with the weight change rate data of Karkanen, since both inventions improve weight loss and weight control, and the features of Karkanen optimize weight loss (Karkanen column 1 lines 6 – 23).

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KAI RAJAN whose telephone number is (571)272-3077. The examiner can normally be reached on Monday - Friday 9:00AM to 4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sam Yao can be reached on 571-272-1224. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Kai Rajan/
Examiner, Art Unit 3769

/Henry M. Johnson, III/
Primary Examiner, Art Unit 3769

October 8, 2011